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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,586	11/21/2003	Steven R. Sedlmayr	AUO1017	3219

7590 04/19/2005
Law Office of Roxana H. Yang
P.O. Box 400
Los Altos, CA 94023

EXAMINER

FINEMAN, LEE A

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/719,586

Applicant(s)

SEDL MAYR, STEVEN R.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 158-173 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 158-173 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 March 2005 has been entered in which claims 158 and 166 were amended. Claims 158-173 are pending.

Claim Objections

2. Claims 159 and 167 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 159 and 167 recite the system further comprising a means for/step of passing one of the resolved beams to a projection means. Claims 158 and 166, from which these claims depend, already include means for/step of passing one of the resolved beams to a projection means as part of the limitations in newly added step [f].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 158-159 and 166-167 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karasawa et al., U.S. Patent No 5,200,843.

Karasawa et al. disclose in fig. 1 a system and method of producing a modulated beam of light suitable for projection of video images, comprising [a] means (1, 2, 3) for producing an initial beam of light; [b] means (4) for separating the initial beam of light into two or more separate beams of colors (R, G, B) whereby each separate beam of color has the same single selected predetermined orientation (S or P, see fig. 5 as an example of S) of a chosen component of the electric field vectors as that of the other separate beams of color and each separate beam of color having a color different from the other separate beams of colors; [c] means (8R, 8G, 8B) for altering the single selected predetermined orientation of the chosen component of the electric field vectors of a plurality of portions of each separate beam of color by passing each separate beam of color through a respective one of a plurality of altering means in a single direction (fig. 1) whereby the single selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each separate beam of color is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as each of the substantially separate beams of electromagnetic energy passes through the respective one of the plurality of means for altering the single selected predetermined orientation of a chosen component of the electric field vectors (column 5, lines 18-23); [d] means (9) for combining altered separate beams of color into a single collinear color beam without substantially changing the altered selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each of the separate beam of color; [e]

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means (15) for resolving; and [f] means (12) for passing a resolved beam of electromagnetic energy/light to a projection means (13), the projection means receiving only electromagnetic energy /light having substantially the same selected predetermined orientation of the chosen component of electric field vectors (S or P from linear polarizer 15). Karasawa et al. disclose the claimed invention except for having [e] means for resolving from the single collinear beam a first resolved beam having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave field vectors and a second resolved beam having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors, whereby the first and second selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another. However Karasawa et al. also teaches that when using a polarizing beam splitter like element 2 (which resolves from the single collinear beam of electromagnetic energy/light a first resolved beam of electromagnetic energy/light having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave field vectors and a second resolved beam of electromagnetic energy/light having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors, whereby the first and second selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another, see figs. 2 and 3), an absorption type polarizer like 14 is not required (see column 5, lines 49-52) and that absorption type polarizers generate higher temperatures which can cause stability problems in the system (see column 1, lines 54-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the analyzing absorption type polarizer (15)

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with a polarizing beam splitter to further reduce the heat in the system. Therefore, step [e] is satisfied. The method of utilizing the structure of the claim is inherent therein.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 160, 163, 168 and 171 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karasawa et al. in view of Konno et al., U.S. Patent No 4,497,015.

Karasawa et al. disclose the claimed invention except for the means for producing the initial beam including producing an initial collimated rectangular beam of light having a substantially uniform flux intensity substantially across the initial beam of light and a rectangular cross sectional area. Konno et al. disclose a light illumination device (fig. 5) which produces a beam (at M) that is collimated and has a substantially uniform flux intensity substantially across the initial beam of light (column 5, lines 43-52) and a rectangular cross sectional area (using lens element 102, fig. 3; column 3, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light source of Karasawa et al. with that of Konno et al. to have a more uniform intensity light beam and provide a more consistent image. The method of utilizing the structure of the claim is inherent therein.

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7. Claims 161-162, 164-165, 169-170 and 172-173 rejected under 35 U.S.C. 103(a) as being unpatentable over Karasawa et al. in view of Konno et al. as applied to claims 160, 163, 168 and 171 above, and further in view of Ooi et al., U.S. Patent No. 5,245,449.

Karasawa et al. in view of Konno et al. as applied to claims 160, 163, 168 and 171 above disclose the claimed invention except for a means for removing from the initial collimated beam of light at least a portion of ultraviolet and at least a portion of infrared to produce an initial collimated beam of white light and means for directing the removed portions to a beam stop whereby the removed ultraviolet and infrared is absorbed and in which the means for separating the initial beam of light into two or more separate beams of light includes means for adjusting the color by removing at least a predetermined portion of color of at least one of the separate collimated beams of color and directing the removed portion to a beam stop whereby the removed portion is absorbed. Ooi et al. teach a projection system (fig. 7) in which the light source includes a means (column 12, line 13) for removing from the initial collimated beam of light at least a portion of ultraviolet and at least a portion of infrared to produce an initial collimated beam of white light and means for directing the removed portions to a beam stop whereby the removed ultraviolet and infrared is absorbed (in so far as the filters are the beam stop). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a means for filtering out ultraviolet and infrared light to the system of Karasawa et al. in view of Konno et al., as suggested by Ooi et al., to reduce the heat of the system (Ooi, column 12, line 14). Ooi et al. further teach the system including a means (32A, 32B, 35A, 35B, 35C) for separating the initial beam of light into two or more separate beams of light that includes means (35A, 35B, 35C) for adjusting the color by removing at least a predetermined

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portion of color of at least one of the separate collimated beams of color and directing the removed portion to a beam stop whereby the removed portion is absorbed (column 17, line 42-column 18, line 28 and the filters are the beam stop). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a means to remove a portion of the colored light to the system of Karasawa et al. in view of Konno et al., as suggested by Ooi et al., to obtain high color purity in the display (Ooi, column 18, lines 32-35).

Response to Arguments

8. Applicant's arguments with respect to claims 158-173 have been considered but are moot in view of the new ground(s) of rejection

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LAF

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April 15, 2005


MARK A. ROBINSON
PRIMARY EXAMINER